

destroying the sources of infection in infected wounds. The experiments with disinfectants have always been made on dead infected objects, but not on wounds. Such experiments on wounds, he says, should be carried out simply to observe whether it is possible to disinfect the wounds themselves. This can be easily done; at least, in septic wounds. It simply requires that an animal be wounded, the septic material placed in the wound, then the rinsing with the antiseptic substance, and observing whether the animal remains alive and healthy or not.

Schimmelbusch has experimented in this way with rabbits and mice. With the first he used a very virulent species of streptococcus, and with the mice he employed the anthrax bacillus.

From these experiments he learned that it was impossible in any case to disinfect such wounds, even though the antiseptic was applied immediately after the infectious material had been introduced into the wound. As antiseptics he employed not only sublimate, carbolic, lysol, zinc chloride, etc., but also caustics, as potash, nitric acid and acetic acid. All of the animals died of streptococci and anthrax sepsis.

The cause of these fatal results rests in the rapid absorption of the virus from the wounds. For example, let a mouse be inoculated in the end of the tail with anthrax, and then after a short time let the tail be amputated two or three centimetres from the root; if more than ten minutes have elapsed between inoculation and amputation, the animal will die of the anthrax disease. It is, therefore, probable that the micro-organisms enter the tissue spaces very quickly, and are soon out of the reach of disinfectants.—*Verhandlungen der deutschen Gesellschaft für Chirurgie*, XXII Kongress, 1893.

IV. Asepsis and Artificial Anæmia. By G. NEUBER (Kiel). For the past year Neuber has used instead of the usual elastic tourniquet for inducing artificial anæmia, moistened linen bandage. The lack of durability and the dirty appearance of the elastic bandage induced him to return to the method recommended

by Stromeyer. As a chief advantage, he speaks of the very much less parenchymatous hæmorrhage after the linen tourniquet band has been removed. The bandage is five centimetres wide and two and a half to five metres long. The shorter bandage can be used on the small limbs of children; the longer suffices for the limbs up to a circumference of forty centimetres; above this the elastic bandage can be employed. The extremity should be elevated for a few minutes, and then the wet linen bandage applied from below upward as far the place of constriction. After using, the bandage can be washed and ironed, and before using sterilized in boiling water. At the place of constriction it is necessary to cover a considerable extent of the limb with the bandage.—*Verhandlungen der deutschen Gesellschaft für Chirurgie*, xxii Kongress, 1893.

V. Anæsthetic Statistics. By Dr. GURLT (Berlin). The sum total of narcoses for the year, which are included in sixty-two reports to the German Congress, amounts to 61,526. After deducting 11,464 nitrous oxide, 50,062 cases remain, with 11 deaths. The sum of narcoses for the last three years is 161,800 with 52 deaths—one death to every 3111 anæsthetizations. Out of 133,729 chloroform narcoses were 46 deaths—1:2907. 14,646 etherizations were without a single death. Mixed anæsthetization with ether and chloroform shows one death out of 4118 cases. Chloroform, ether and alcohol (after Billroth) shows no deaths among 3440. Bromethyl, 4555 cases, 1 death; pental, 597 cases, 3 deaths.

In Germany and the neighboring countries unmixed chloroform is employed more than three times as much as other anæsthetics. The glacial chloroform of Pictet is by no means perfectly safe; for during the past year three deaths have occurred out of 666 cases. The deaths from chloroform were in young persons eighteen to thirty years, and in the five autopsies which were made nothing especial was found.

Seventeen observers who reported their statistics have highly endorsed ether. They recommended it for the vigorous heart